

Enactivism, the Mind-Body Problem and Perceptual Consciousness

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Introduction

I started this project a very ambitious graduate student. Head first I jumped straight into the problem of consciousness like a bull in a china shop. But the back wall of this china shop was painted red. The red wall had "mind body problem" written all over it. I ran straight into it. I also walked into a big black box that was at the TATE modern in the turbine hall. The big black box was a piece of art by a polish artist called Miroslaw Balka¹ (October 2009- April 2010). Whilst I was in there I wasn't able to see properly.

Firstly, why is the example of the black box important for this project? One's experience of the black box is important for this project because it is an example of how I think one should understand the relationship between perception and action. How I do I defend this position? To start I explain what it is like for one to experience the black box. We see Balka's description here too. I explain that because one cannot see, one relies more on their body as a means to navigate their way. There are two important aspects I flesh out in relation to this claim. The first is that one viscerally feels the space around them in a way that is bodily centred and closely coupled with the environment and the second is the way in which one starts to anticipate more fully the future consequences of their movement. This forms the basis for my defence of the enactive view of perception and action, and in particular Alva Noë's sensorimotor theory.

But there is a sense in which Balka's description of one's experience of the black box is behaviouristic. The behaviourist says that there is nothing it is like to experience x that cannot be explained in terms of behavioural dispositions. One could question whether or not the behaviourist is right to make this claim. The enactivist would question this claim because he would say that reducing phenomenology to behavioural dispositions would mean that there is nothing it is like for one to have a certain experience.² This discussion forms the second section of chapter two. Next we see how enactivism provides a skilful alternative to behaviourism and I say why this view ought to be preferred. I end this chapter by saying that one's experience of the black box is comparable to an experience that the enactivist's call experiential blindness. I say that this lends support to my view of perception and action because one overcomes experiential blindness and the temporary blindness experienced in the black box in the same way.

One overcomes not being able to see properly because one understands the future consequences of one's movement.

¹ The Unilever Series: Miroslaw Balka Tate Modern 13 October 2009 – 5 April 2010 See <http://www.tate.org.uk/modern/exhibitions/unilevermiroslawbalka/>

² Daniel Dennett (1988) says that this is why he is so keen to stress that he is not denying that experiences seem to have qualia.

Secondly, what is the mind body problem, and why is it important? The mind body problem, in a nutshell, is the problem of how to understand the relationship between the mind and the body. In other words, it is the problem of how to understand the relationship between minds or mental processes and bodily states or processes. The word “relationship” here, in the first instance, concerns the metaphysics of mind. The study of the metaphysics of mind is to do with the problem of how to conceive of the nature of mind as a whole. Under this umbrella of thought comes the idea that mind is a piece of material matter (such as the mind-brain identity theory, originally developed by (Smart (1956), Place (1956))³.

Rene Descartes (1641) is famous for being a substance dualist, the idea the mind and the body consist of both of these substances. With Descartes proposal comes the question of how the two substances interact. This raises issues to do with causality, (the problem of how something physical can produce something non-physical). This is a common theme in studies about perceptual consciousness. Examples of the sorts of problems that are dealt with in studies of perceptual consciousness include how a physical piece of sloppy grey matter like the brain can give rise to the delicious taste of pizza. Another example would be the question of what gives rise to sensation of the colour red one has when one sees a red rose. In talking of perceptual consciousness we call these sorts of sensations “qualia”.

Benidict De Spinoza (1996 ed.) thought that substance monism was the correct way to understand the relationship between the mind and the body. Substance monism is the idea that there is “One substance” of which there are “two fundamental attributes” or ways of conceiving it. The two attributes of the one substance are thought and extension. At the opposite end of the spectrum we have idealism that favours the mental over the physical. Other branches that come off of the mind-body problem tree include questions to do with the fundamental nature of reality itself, such as how one ought to conceive of minds ontologically and bodies ontologically. The tree keeps on growing.

In the second chapter I address David Chalmers’ (1996) take on the mind-body problem. Chalmers version is the “hard problem” of consciousness. This problem is hard for Chalmers because for him it does not seem possible to reduce qualitative facts such as the “what it is like” to taste pizza to physical processes. Chalmers uses this problem as he sees it to defend a sort of dualism.

³ Smart and Place reacted to behaviourism which said that mental states can be described in behavioural terms. Smart and Place said that if we cannot describe mental states in these terms then we could probably describe them as internal states of the brain. This idea was coined “Type physicalism” or the “Type identity-identity theory), and says that mental state *S* equals brain state *B*.

But what I want to argue in this chapter is that it is the notion of qualia that generates the hard problem. This is because qualia are said to be intrinsic to the organism. The problem is that if experience has qualia that are intrinsic to the organism then internalism must be true. Internalism says that conscious experience can be fully explained in terms of processes that are located within the organism. The sensorimotor theory presents a challenge to internalism because of the way in which it seeks to explain phenomenal consciousness in terms of partially external processes such as one's interaction with the environment. This discussion looks at how the sensorimotor theory deals with presence in absence.

One could claim that vehicle internalism is true without accepting that there are qualia. But even if not all vehicle internalists accept the existence of qualia I still think that qualia generates internalism. And if we can show that there are no qualia then we can in turn show that the vehicle internalist who wants to explain all conscious experience in terms of processes inside the head is being a little too ambitious.

But there is an important objection to the sensorimotor theory from the internalist that needs to be addressed. The objection is in terms of the existence of saccadic gaps in blinking, and the related problem of why appearance seems to one to be clear and in continuous focus. But it seems that we get a good response from the enactivist here too.

Joseph Levine (1983) originally said that we lack “an explanation of the mental in terms of the physical” and coined the problem the problem of the “explanatory gap”. In the third chapter I address Frank Jackson’s (1982, 2986) take on this problem in terms of the “knowledge argument”. Jackson put forward the “knowledge argument” as a problem for physicalist accounts of the mind. Physicalist’s say that all conscious experience can be explained in physical terms or by looking at physical processes. But the knowledge argument seems to show that subjective processes cannot be described in physical terms. This is because even when we explain all the facts about colour experience in physical terms there remains something that one cannot know about colour experience until one has seen colour for themselves.

Jackson makes this point using the thought experiment involving Mary the colour scientist who knows everything about colour but who has been confined to a black and white room since birth and so has never seen colour from her point of view.

In this chapter we ask how Mary comes to learn something new when she leaves the black and white room. All that Mary learns when she leaves her black and white room and goes into the outside world for the first time and sees a red rose is how to understand her relationship between the appearances of things and how they vary with movement.

But even if we accept that Mary learns something new in this way there is still a sense in which the sensorimotor theory faces a gap of its own. Presenting a new version of the knowledge argument in sensorimotor terms shows that there is an equivocation between procedural knowledge, “know how”, and theoretical knowledge, “knowledge that”. The idea here is that only with practical “knowledge how” is Mary able to gain the skills she needs to achieve phenomenal knowledge of the colour red. And Mary can only get this “knowledge how” and learn the new skills when she is acquainted with the red rose in the outside world. This shows that “knowing that” is not the same as “knowing how”, and that with theoretical knowledge alone one does not have practical knowledge that one needs to get sensorimotor skills.

Then there is the final worry of how the enactivist is to properly understand the problem of subjectivity and objectivity. This problem arises in response to Thomas Nagel’s (1974) take on the mind-body problem. This problem that we address in the final concluding chapter can be called the problem of perspectival subjectivity, a problem Nagel presents in asking us to imagine “what it is like to be a bat”. The enactivist could claim to answer this problem by saying that subjectivity is embodied. A way in which we can defend this view is in terms of Merleau-Ponty’s (1945) phenomenology and the idea of the body-subject.

If the body becomes the subject then in this way, then one could understand their body-subject in terms of their being a *Leib/Korper*. This is a solution that Hanna and Thompson (2003) give to the mind-body-body problem. The idea here is that the subject as an animal is equal to a “living and a lived” body (a *Korper*) that is understood in terms of two aspects- the subjective and the objective. This means that the terms subjective and objective are just two ways of knowing about experience and the body. I say that this is in some respects similar to Spinoza’s (2004) monism. I leave it as an open question as to whether or not this is the right sort of metaphysical system in which to understand the mind and the body.

Chapter One

Introducing Balka's Black Box

The work by Mirosław Balka, a Polish artist, is a windowless room 50ft high and 40ft long that is designed to create absolute darkness inside. In the turbine hall of the TATE Modern, one walks up a ramp into a container like room. This is, how it is:

The further one moves into the black box the darker it gets until one cannot see the person beside them. In this instance one momentarily experiences what it is like *not* to see. Phenomenologically speaking, as the eyes become weaker one becomes more aware of one's body. One explores in a tactile way. For example, one is suddenly very aware of one puts one's feet. And one becomes more attuned to how they automatically use their arms as an extension of one's body. When one reaches the back and feels the furry wall one will no doubt be surprised. Quiet sounds in the distance become loud and prominent in the near vicinity of one's ear. One cannot see. But one can undoubtedly feel what is going on around them. All of this is to help one successfully navigate one's way through the space.

The word "feel" is weighted. My purpose here is not to pursue the question of the nature of feelings and what it is to ascribe them content. I use the term "feel" to refer no more to the fact that despite lack of vision, one is still explicitly aware of what is going around them. Although this awareness is sort of alien in its nature, for the environment in the black box is unfamiliar, one still has a deep and intuitive sense of feeling of the space. One is viscerally more aware. For example, one has the intuition of unease and is aware of the slightness of the body that is needed to navigate through the space.

One's phenomenology in the black box is brought about in a different way to when one's vision is not impaired. Nevertheless, one still has some kind of phenomenology. How does one's bodily subjectivity come to feel these things? In what does one's phenomenology consist? Balka⁴ describes the experience of "How it is" as brought about by employing three bodily gestures:

1. "How? A question one asks themselves concerning the body when standing outside the box: "How should I enter?" This initial feeling of uncertainty makes one feel uneasy.
2. It. We are unsure what exactly is in front of us when we are standing at the entrance. The referent of "it" is unknown.

⁴ See interactive site: <http://www.tate.org.uk/modern/exhibitions/unilevermiroslawbalka/explore/> for Balka's description of "How it is".

3. Is. We make the gesture of exploration and discovery through use of the body. We are ready to use this gesture when we have answered the first "how" part of the story, when we have an understanding of the correct way to move in the darkness. We finish the "sentence", and the "How it is" story is complete".

The composite of these three gestures entail epistemological and phenomenological claims. The former is demonstrated by the way one implicitly acquires and uses some form of knowledge to move successfully in the darkness. For example, "how?" is the question one asks them selves when standing outside the box, when trying to formulate the knowledge needed to move in the safest way. The latter, the phenomenology, is described as product of using the body to explore. Take the phenomenological part here to be "Is".

I think we can learn something about the relationship between perception and action by looking at one's experience of Balka's Black Box. I think the way in which one uses their body to experience the black box lends support to the sensorimotor theory; the idea that one uses sensorimotor knowledge or knowledge of sensorimotor contingencies to guide their actions. This is because in one's experience of the black box the epistemological question of how to move and one's phenomenal experience seem to become part of the same process.

Introducing sensorimotor knowledge

It will be useful to define what is meant by sensorimotor knowledge. Sensorimotor knowledge as I understand it, consists in one's knowledge of the future sensory consequences of one's movement. For example:

When you see the cube from a particular vantage point, you encounter its aspect from that vantage point. As you move with respect to the cube, you learn how its aspect changes as you move- that is; you encounter its visual potential. To encounter its visual potential is thus to encounter its actual shape. When you experience an object as cubical merely on the basis of its aspect, you do so because you bring to bear, in this experience, your sensorimotor knowledge of the relation between changes in cube aspects and movement. To experience the figure as a cube, on the basis of how it looks, is to understand how its look changes as you move. (Noë, 2004, p. 77).⁵

The idea here is that looking at a cube is a perspective bound affair. It is an inescapable fact that one can only ever see the cube from their singular point of view. Because of this fact, one will only ever see three of the six facets that a cube has. Noë (p. 77) uses an example from

Koenderink (1984) to illustrate this point: “[...] we can call the aspect of the cube available from a vantage point the visible facets of the cube from that vantage point”.

We could say that the way in which one uses their sensorimotor knowledge to move within the black box is suggestive of close coupling and interdependency between the perceiver and their environment. We can say that one is closely coupled and has an interdependent relationship with one’s environment because one implicitly uses knowledge about the future sensory consequences of one’s movement to skillfully *guide* one’s movement. How does this sensorimotor knowledge show that perception and action are interdependent? Consider an example of haptic perception:

Suppose you are a blind person holding a bottle with your hand. You have the feeling of holding a bottle you feel the bottle. But what sensations do you really have? Without slight rubbing of the skin, tactile information is considerably reduced, and even temperature sensation will, through adaptation of the receptors, disappear after you have held the bottle for a while. In fact therefore, you may well have very little sensory stimulation coming from the bottle at the present instant. Yet, you actually have the feeling of “having a bottle in your hand” at this moment. (Noë and O’Regan 2001. p. 7)

The sensorimotor theory says that it is possible for the blind person to have an accurate experience of the bottle because ones brain is "tuned" to certain "potentialities". These certain potentialities are associated with "bottle-like" characteristics. They are in virtue of the fact that one knows that sliding one’s hand very slightly around the bottle would bring about changes in the incoming sensory signals associated with the smooth surface of glass and the narrowing neck of a bottle.

One could say that the bottle behaves in a “bottle like appropriate manner” which enable one to have the type of experiences that are characteristic of a bottle. But we should be careful about making claims like this because there is a risk of sounding like the behaviourist who wants to explain phenomenology in behavioral terms.

But I think the example is important because here the blind persons movement is integrated with his patterns of thought. The blind persons patterns of thought are about the typical qualities associated with a bottle and the blind person integrates these thoughts into his movement in the way that he explores the shape of the bottle. This integration is an example of interdependency; interdependency between the perception of the bottle and the action one uses to explore the bottle. And it is in virtue of this interdependency that the blind person can have a unified experience of the bottle *without* being able to see. In the section called “experiential blindness” we look at a cataracts patient who lacked this interdependency.

The implicit knowledge about the sensory consequences of one's movement plays a crucial role in the analogy of haptic perception. We can also make a link here to how the role this knowledge plays in occlusion in vision⁶. The blind person has a complete experience of the bottle even though they cannot see the bottle in virtue of the fact that they are attuned to the certain potentialities and characteristics of the bottle. With occlusion in vision, one experiences what is hidden from view as present because they are attuned to the fact that moving would bring what is hidden into view, they are attuned to the possibility or "potentialities" of experiencing what is hidden from their view.

I think that this interdependency calls into question the SMPA model of cognition. To that we turn to next.

Why perception and action are not distinct processes

The Sense Model Plan Act (SMPA) model of cognition offers an account of perception and action that consists of separate stages. The model has been debated in robotics for designing autonomous artificial agents. Haugeland (1985) described the model as "good old fashioned artificial intelligence" (GOFAI). The idea here is that mental states can be described in terms of computations based on symbolic representations. Reaction to a visual stimulus on this approach is a process whereby the agent gets an input from the world that is transformed into an internal symbolic representation. This is then compared to representations stored in memory and creates the appropriate output representation to guide motor actions. The SMPA model is illuminating for us in two respects; (1) it is necessary not to think of perception and action as two distinct processes and (2) we must see perception and action as adaptive processes that react to changes in the environment over time.

Robots such as "Shakey" have been built using this model. The robot is said to be able to "reason about its own actions" from picking up sensory information in the environment. To do this Shakey uses a camera along with his symbolic representation system, enabling him to independently push blocks off a shelf. Shakey:

1. Senses through independent sensors on his body enabling him to
2. Form an internal map or model of his surroundings.
3. Shakey then formulates a plan of how to act. Then,
4. Shakey is finally able to move independently in the environment.

⁶ Occlusion in vision is an example of presence in absence. Presence in absence is how one experiences what is hidden from their view as present. Noë says that what explains this odd sense of presence is one's implicit sensorimotor knowledge.

The above shows how GOFAI makes the processes between perception and action distributed across four pit stops, consisting of distinct stages. The stages enable Shakey to calculate the information given by his surroundings, represent that information, and then move. For good reason, however, this model has been rejected. The problem with the model is that Shakey may be able to perform these simple tasks, but there is a sense in which the system is not comparable to natural systems like our own. Because Shakey operates in the static environment of the laboratory it is difficult to see how he could respond appropriately to changes in the natural environment. This issue has been addressed by the "grounding problem", (McCarthy and Hayes (1969)) and emphasizes the problem of how the internal representations Shakey uses could be adapted appropriately over time. How can Shakey's actions be seen as appropriate responses that are consistent with real world changes?

The burden is on the internal maps that Shakey forms at stage two. Indeed, those maps allow him to proceed to stages three and four. Because some objects in the natural environment and surroundings are constantly moving, Shakey needs to be able to respond appropriately to these changes. This requires some sort of "on-line" response activity.

The ability to respond appropriately to change is what differentiates autonomous agents like our-selves from a semi-autonomous agent like Shakey. Shakey's reactions will always be confined to the static environment he is in. This is because the GOFAI model that Shakey is built upon works on a system that uses higher order abstract information processing, (such as a computer playing chess). Shakey's ability to push blocks off a surface is higher order and abstract in this way, (there is little or no low level processing occurring in Shakey that is required in systems using fine-grained and detailed information). Such fine-grained detail and lower level analysis *would* be needed for Shakey to represent changes in his environment.

Robotist Rodney Brooks (1991) offers a response to the SMPA model. Brooks took issue with the *need* for internal representations in all animate behaviour. He purported to show that representations are *not* necessarily needed for *all* intelligent behaviour. This is best demonstrated by his famous phrase "intelligence without representation". His main reason for this was that the idea that internal representations were used in all animate behaviour was impractical and inefficient. Brooks' reason for this was that using representations in all cognition resulted in a "representational bottleneck" that blocked a fast a real-time response to things. Brooks argued that such a problem could be avoided if we instead use the world "as it's own best model".

So Brooks questions the SMPA model's central tenet representations. We could say that this lessens the feasibility of the model. For if representations are blocked from Shakey's stages between perception and action then the whole process could fall apart. If there are no representations being used in Shakey's computational system then Shakey is not able to move at all. This is because stages two and

three would not be possible without positing "internal maps", and internal maps I understand to be representations. The crucial issue here, of course, is whether or not Brooks' rejection of representations is sound and valid. This is a separate issue and one I wish to bracket.

But I agree with Brooks' idea that one must try to form the most efficient explanation of what happens when one perceives. The guidance of action need not necessarily rely on internal representations because the world itself can serve for this purpose; the world can serve as "its own best model". Brooks identifies how representations may be employed to guide behaviour in an agent in a static environment, but when it comes to *all* animate behaviour the practicality of representations remains questionable.

The important thing to take from the SMPA model that GOFAI used is that the model prevents one from appropriately responding to changes in the environment, (a feature necessary for animate behaviour like our own). The model prevents one from adapting to changes in the environment because the model separates the perception and action processes that mean that it lacks interdependency. One's experience of Balka's black box defends the idea that perception and action need to be interdependent processes. It is especially illuminating with regards to one's need to adapt to change in the environment.

I think one's knowledge of what one assesses in the environment cannot be divorced from the way one enacts this knowledge in their behaviour. In light of this claim, one could argue that one enacts the content of what they know in sensorimotor terms in their behaviour in the world. Indeed, the direction we are heading in supports this view; it says that the content of knowledge one gains from subconsciously assessing one's environment is skillfully enacted in one's behaviour in the world. The way in which one implicitly understands sensorimotor contingencies is responsible for this enactment.

Behaviorism

We have said that in one's experience of the black box the epistemological question and phenomenal experience seem to become part of the same process, and that this conception of experience is very similar to the sensorimotor theory. But one could say Balka's description of the way in which one experience's the black box seems is explained in behavioural dispositions. So Balka claims that one's phenomenology, or what it is like for one to experience the black box, can be described in behavioural terms. If one accepts this claim then the following question arises: Should we accept that there is nothing "it is like" to experience the black box that cannot be described in behavioural terms?"

You may be a behaviourist if you affirm "hypothesis about psychological events in terms of behavioural criteria" (Sellars 1963, p.22). If you agree with this statement, then, by hypothesis, you also agree that only by a demonstrable difference in the behaviour associated with two states

of mind can two states of mind be individuated. This amounts to the claim that reference to mental events or psychological processes is of less importance when explaining behaviour. The consequence this has for what perception is supposed to consist in is that perceptual content become events relevant to nothing other than behavioural dispositions.

"Analytical" or "logical" behaviourism took this claim further, by looking at what mental terms or concepts are supposed to *mean*. By recognizing the way concepts are often used to describe behaviour, the analytical behaviourist said that attribution of such mental terms or concepts should be replaced by behavioural terms or translated into behavioural concepts:

- A mental state or condition is \approx the idea of a behavioural disposition.

For example, I may say that John prefers red apples to green apples. By this statement I am attributing John the mental state or belief that he prefers red apples. Under the analytical behaviourist description, however, saying that John has the mental state, the belief, that he prefers red apples, can equally be described in terms of a behavioural disposition. John's very idea of the mental state that he prefers red apples to green apples *is* the idea of a behavioural disposition of preference he has towards red apples over green. John's perception of red and green apples, and what it is *for* John to perceive them, serves no more a purpose than to guide his behavioural preference in his actions.

Thus, Sellar's would say that the only reliable way we can know that John prefers green apples to red is by looking at the way John behaves when he has to make the choice between red and green apples. On this view, John's behaviour is suffice to explain the fact that he prefers red apples to green apples, and because of this there is no need to reference mental events. The analytical behaviourist's concern is thus to do with the semantics of mental states or concepts, and how these can instead be referred to in behavioural terms.

One upshot of behaviourism of the type that Sellar's proposed is that it can be seen to ground the inference of ideas or mental states in others from looking at their behaviour. It is indeed true that we frequently ascribe mental states in others by looking at their behaviour. For example, I know that Adam is angry when he slams down the phone.

The down shot of behaviourism, though, is that it says there are no intrinsic qualities to states of mind. States of mind "*qua* states of mind" do not have an intrinsic qualitative nature. States of mind seem to owe their identity to their dispositional powers to act in a certain way, and not to any intrinsic qualitative nature. This can be seen by the proposition: "A mental state or condition is \approx the idea of a behavioural disposition".

This, of course, is to walk hand in hand against introspection. Introspection is said to be the way subjects find out about and attribute qualitative sensations and feelings to themselves. I know that I have a headache because I can "look inside" and feel the pain in my head. Or, I know that I feel happy today because I introspect that this is so. Introspection says that there is "something it is like" to have a headache, and what it is like to have a headache is different from what it is like to enjoy the taste of chocolate, or to have other kinds of conscious experience. My ability to know about and have the conscious experience of my headache owes itself to my ability to introspect.

One way to respond to the behaviourist would be to ask, "In what does the experience of the red look of the book consist if not in one's acquaintance with a simple quality of experience, namely, the red quale?" (I think the term "quale" is ambiguous in this context, so take "quale" here to refer to the phenomenological character or "what it is likeness" of looking at the red book, (I take the use of the word "quale" here not to be referring to the traditional use of the word in terms of what the dualist may argue for)). So in other words, the question is, "in what does one's experience of the red book consist in if not in the experience of the phenomenological character of a red book?" This is a challenge to the behaviourist. Noë (2001 p. 137-141) raises this issue and provides an alternative.

The next section will show why Noë thinks the behaviorist is wrong. The remainder of this chapter will show why we should instead favor of the sensorimotor contingency theory that he proposes.

The skilful alternative to behaviourism

We have seen that, for the behaviourist, the perceptual experience of colour should not be described in any terms other than the ability to behaviourally discriminate between different colours. The behaviourist sees "looking red" as describable in behavioural terms. So on this view the mental concept that we think represents "looking red" is really just the behavioural concept of being able to discriminate red from green, for example.

Given this description one could say that for the behaviourist there is nothing qualitative about "looking red" in mental terms. So if what it is to "look red" is merely a behavioural disposition, then there is nothing more to having the disposition to discriminate the colour red such as describing it in qualitative terms. The behaviourist thus seems to form an identity thesis between "looking red" and the behavioural ability to discriminate the colour red.

Noë accepts that one's phenomenology supports the view that one behaviourally discriminate between colours in the environment: one would not be able to sort between red and green apples if it weren't for one's ability to discriminate colours. The fact that one can do this is because one can recognize similarities and differences between colours; John can sort the red apples from the green apples, for example.

The central reason Noë rejects behaviourism is because he thinks it is a mistake to reduce experience of the world to a simple matter of behavioural dispositions. He says there is more to phenomenological experience than can be described in behavioural terms because perceptual experience *depends* on "perceptual knowledge and on the skill within which you bring this knowledge to bear on what you encounter" (p. 138). So it is to some degree right for the behaviourist to say that different experiences tally with behavioural dispositions. But the behaviourist goes too far in saying that qualitative experience is nothing more than a behavioural disposition:

After all, when we visually discriminate *red* things, picking them out, say, from among green one's, we do so on the basis of *how they look*⁷! Discriminatory behaviour flows from discriminating experience; one needs a *non-behaviourist* account of what it is for something to look *red* (p. 138 (italics my own))

The emphasis here is on the term "skill". Skill is necessary in order for one to experience something as "looking coloured", as, "looking red". On Noë's view "looking red" and discriminatory skills are in a relation of *dependence*. We can say that the looks of things and discriminatory skills are in a relation of dependence because in order for John to discriminate the red apple from the green apple, for example, the red and the green apple must have some sort of look that John can identify. I think this is what Noë means by the claim "discriminating behaviour *flows from* discriminating experience". John's experience of the red and green apple comes before his discriminating the red apple from the green apple. In this sense John would not be able to discriminate the red apple from the green apple if the red or the green apple did not have a certain "look", a certain "what it is like" feature to it. On the behaviourist's view, however, the "look" of the red apple is just the way one discriminates it from the green apple in behavioural terms.

⁷A central theme in Noë's account is that objects and things in the world have "looks". It may seem as though the idea that things have 'looks' is obvious. But Noë uses it as a motivator for including phenomenology in his account of perception and action.

So the idea of dependency between “looks” and discriminatory capacities separates Noë’s view from the behaviourist’s view. How does one enact this perceptual knowledge about the “looks” and appearances of things in their behaviour?

Noë (p. 138-139) uses Pettit (2003) to show perception consists of a more "mature range of discriminatory capacities". These are above discriminatory capacities in their complexity. The mature range of discriminatory capacities from which Noë defends Pettit consist in the ability to experience and respond to something as "lighter than this", or, "darker than that". Noë says that such knowledge represents the colours “aspect profile”, and it is knowledge of colour aspect profiles that makes discriminatory capacities more than just *external* evidence of colour perception. (Let “external” mean behavioural evidence here).

What are the colour aspect profiles of objects? The colour aspect profiles of an object are how things become determinate colours in the “here and now”. Knowledge of the colour aspect profile, “looking red”; “darker than pink”, or, “lighter than brown”, is knowledge that it looks such like and that it varies in appearance in comprehensible ways. This comprehensiveness is how one can experience the colour red as differing to the appearance of other colours. It is governed by one’s implicit knowledge of the colour aspect profile it possesses that is relevant to the colour red. But more needs to be said on how this is done. Pettit (p. 230) says:

The object looks *red* so far as it overtly enables you to sift and sort and track it in the *red*-appropriate manner, and to make corresponding judgments; it looks *red* so far as you see it as extracting those responses from you.

The ability to comprehend different colours is given by the fact that there is a certain “red appropriate” manner in which seeing the colour red consists. There is a particular way that “red looks”, and the particular way that red looks extract particular responses from you. The red appropriate responses are the ways in which you are able to make judgments that correspond to the way the colour red looks. So it is in this sense that the colour red extracts these corresponding judgments or responses from you.

When one sees the colour red and “sifts” and “sorts” it from other colours one is enacting the content of their perception of the way that the colour red “looks”. For example, when you see a red apple and pick it out from a green apple you are enacting the perceptual content you have from seeing the red apple. In this sense one’s perception of the red apple becomes a part of one’s action that separates the red apple from the green apple. Because the colour red behaves in a sort of red appropriate manner, (the way that it “looks”), this allows you to make corresponding judgments about the way that it looks. But your corresponding judgment or “sifting” and

“sorting” of the red apple from the green apple is a behavioral disposition that is not the same as your experience of what the colour red *is like*. It is just that your judgments about the way that the colour red looks *allow* this discriminatory behaviour. Your “sifting” and “sorting” *flows from* the way the colour red looks.

Without noting this important point it could be easy to throw the behaviourist charge at Pettit. One could say that at first glance Pettit appears to see "looking red" in terms of bringing about certain behavioural dispositions that are associated with the colour red. One would interpret Pettit here as saying that one experiences the colour red *just because* the colour red is capable of extracting “red appropriate” responses from them. But the following schematic argument of what we have said above counters this claim.

1. The colour red must possess some *a priori* intrinsic properties to be triggered in perception
 2. These *a priori* intrinsic properties make up for the way the colour red looks about which one makes corresponding judgments.
- Therefore,
3. One’s corresponding judgment is possible because of the way the colour red looks but it is not all there is to the way that the colour red looks.

Behavioural space

The experience of space can also be explained without describing it in behavioural terms. To show this we need to briefly look at a conception of space that is considered to be behaviouristic.

Evans (1982, 1985) claimed that spatial content was linked to behavioural output. For Evans, an organism acquires spatial content by a mastering a bundle of spatially directed sensorimotor skills. For example, the content of my knowledge that Big Ben is to my right when I hear Big Ben strike at ten o’ clock consists in, by definition, my possession of certain behavioural dispositions to move to the right with respect to Big Ben. Consider Evans’ explanation:

The subject hears the sound as coming from such and such a position, but how is this position to be specified? We envisage specifications like this: he hears the sound *up*. or *down*, *to the right* or *to the left*, *in front* or *behind*, or *over there*. It is clear that these terms are *egocentric* terms: they involve the specification of the position of the sound in relation to the observer's own body. But these egocentric terms derive their meaning from their (complicated) connections with the actions of the subject... (Molyneux’s Question: 384)

So the term "egocentric" denotes meaning to the location of an object not in terms of where it may be in absolute space but in terms of where it is in relation to me. I can know that Big Ben is to my right when I hear Big Ben strike at ten o' clock because of my own position in relation to Big Ben. And at this moment Big Ben happens to be on my right. On Evans' view, my egocentric space *is* precisely my behavioural space because it is a space defined by ways of moving. For example, I will move towards the right when I hear Big Ben strike. So the behaviourist says I experience Big Ben as being to my right precisely because I am behaviourally disposed to move to my right to encounter Big Ben, as governed by my hearing the sound of Big Ben strike at ten o' clock.

An additional feature of Evans' view is that the contents carried in virtue of the mastery of skills are non-conceptual. The idea here is that it is not necessary that an organism possesses the concepts required to characterise the success of certain movements. The fact that an organism can master the skills to do a certain thing correctly, or move in a certain way successfully, is in virtue of the fact that they possess these skills alone. As Grush (1998) puts it: "[...] an organism can master skills in an epistemically responsible way, without mastering the concepts required to characterise those success conditions". I have mastered the skill to move to the right when I hear Big Ben strike without necessarily possessing a concept of the success conditions. My egocentric space in relation to Big Ben suffices to inform my behavioural disposition. It is because of this that we can say it is "epistemically responsible".

So Evans' view suggests my *experience* of Big Ben consists precisely in my possession of my behavioural disposition to move to the right to get to Big Ben. And my knowledge of this disposition is conceptually void of content. It is in the first respect that Evans commits the behaviourist crime. My phenomenal experience of Big Ben striking is nothing more than that which can be described by my behavioural disposition to move to the right in respect of Big Ben. In what way does Noë's view differ?

Noë says my experience of Big Ben as being on my right consists *not* in my disposition to move in a certain way, (towards the right), but in my possession of the knowledge of *how* my movement would bring Big Ben into view. My experience of spatial content is possible because I possess the necessary skills needed to change or improve my relation to an object to bring it into view. The sensorimotor skill that I have to move in a certain way is not equal to my experience of something being somewhere in relation to me. Rather, my experience of spatial content is *dependent* on my necessary skills. The fact that I possess these skills allows me to experience Big Ben as to the right of me, but the experience of Big Ben as to the right of me is *not* the same thing as my behavioural disposition to move to the right.

Behavioural dispositions, and what it means to behaviourally discriminate between colours, for Noë, are examples of how one uses one's knowledge of sensorimotor contingencies. The above presents how they are relevant for understanding the experience of space and for understanding colour change; change in relation to other colours and change in relation to the qualitative space of colour. Both examples are examples of how experiences can change in relation to movement, and the necessary sensorimotor skills that an organism requires to do this.

Experiential blindness

How Balka's Box has been described so far may appear to make the claim that being blind is like being in the dark. Those who can see often arrive at this conclusion. As Noë suggests, this is almost to say that a blind person has a "gigantic black hole" in their consciousness, "a permanent feeling of incompleteness" (p. 3). But consider that just because you cannot see what is happening in the room next door this does not mean that there is a gaping hole in your consciousness of the room next door. This example also brings to attention the fact that one does not experience a black hole in the part of the visual field that falls on their blind spot. The long-term blind do not experience blindness as a disruption or an absence. There is no gigantic black hole in their consciousness. The blind, in fact, do not experience their blindness at all. I think we must instead compare the temporary blindness experienced in the black box to that experienced in a fog filled room.

In a fog filled room one experiences a homogenous sheet of white. Similar conditions can be achieved in what psychologists call the "Ganzfeld" experiment (Metzger 1930). To achieve the Ganzfeld effect subjects place half a Ping-Pong ball over their eyes to create the illusion of the experience one has in fog filled room.

When one experiences the Ganzfeld effect one cannot decipher the figures and shapes in one's environment. The Ganzfeld victim can see the homogenous white, (she is not typically "blind" in this way), but because of the blur distributed across her field of vision she cannot understand or interpret the environment around her. This means that what the Ganzfeld victim sees is bleached of any content.

Consider driving in fog at night as another example. What one is able to see of the road and its content is severely reduced. One can "see", but it is blurry. In sever cases boundaries and lanes on the road become almost impossible to see. In this situation one finds oneself slowing down and adjusting the position of one's body to try to get a better view of the road.

In light of the above we could say that lack of content in vision is responsible for experiential blindness. I think we need to elaborate on this idea a little bit more in order to establish its importance in terms of the sensorimotor theory. Noë's definition of experiential blindness is:

“[...] Experiential blindness is not due to the absence of sensation or sensitivity, but rather to the person's (or animal's) inability to integrate sensory stimulation with patterns of movement and thought” (p. 4).

They use Gregory and Wallace's cataracts patient (S.B) recovering from a cataracts operation as an example:

S.B's first visual impressions when the bandages were removed were of the surgeons face. He described the experience as follows: He heard a voice coming from in front of him and to one side: he turned up towards the source of the sound and saw a “blur”. He realized that this must be a face. Upon careful questioning, he seemed to think that he would not have known this was a face if he had not previously heard the voice and known that voices came from faces. (1963, p. 336)

Noë says that this example demonstrates experiential blindness because although the patient's visual ability is improved by the operation, it is clear that it takes a while for the patient to regain sight and “learn to see in the true sense”. This amounts to the claim that S.B's report of his visual impressions is confused and contains very little reliable information. Thus, Noë says that S.B “has sensations, but the sensations don't add up to experiences with representational content”(p 5).

How Gregory and Wallace go on to describe the patients' visual ability as improving only “when his visual attention was called to objects, before which he would generally pay no attention” (p.364) is also important. This is because at this point S.B lacks the practical understanding of the importance of his visual impressions for movement and thought.

In our discussion of the SMPA model of cognition we said normal perceivers smoothly integrate patterns for thought and movement with perception. We that it is necessary that one can respond in a way that is consistent with the way real world objects move and change over time. The fact that S.B's attention has to be directed towards objects by his doctors in order for him to really attend to them shows that he initially lacked that ability for integration. The example of close coupling in normal perceivers is missing here.

I think the darkness one experiences in the black box is like the above examples of experiential blindness. This is because one has *some form* of visual impressions but these visual impressions are initially misunderstood. In the black box, one is not “blind” such as a person with no sight,

because, like the Ganzfeld victim who sees the foggy white blur, one can see the darkness ahead. But even though one may still have some from of normal visual sensation one's experience of the darkness is bleached of content.

Because of this we can say that when one first enters the black box one is experientially blind. One does not properly understand the unfamiliar environment because what one sees is lacking in content. Consequently it takes a while for one to adjust to the environment and acquire the skills to move through the void successfully. In order to do this one must understand what one need do to adapt to the environment. And in order to do this one must anticipate the future consequences of their movement. I think the way one overcomes one's initial experiential blindness in the black box in virtue of what the sensorimotor theory says is one way to demonstrate that one's brain body and environment are closely coupled and in an interdependent relationship. This close coupling differs from the linear description of perception and action that the SMPA model uses because it shows how one needs to adapt to their environment. The SMPA model that was used to design Shakey failed in this respect.

We have talked a lot about how the sensorimotor theory rests on one's "knowing how" to move. But I have noticed a difference between knowing "how" to move and "knowing the sensory consequences of movement.

Balka said that the question of "how" to move constitutes the viewer of the Black Box's first gesture. I think the question of "how" to move makes the suggestion that perception is for action. This is because it says that one perceives and assesses the environment in order to act accordingly. Knowing "how" to move is an inference from understanding ones surrounding environment and then applying this to how one decides to act. In the case of the black box, one assesses the dark environment ahead and moves through the void according to this information.

I think that "knowing the sensory consequences of movement", on the other hand, places perception in action. I think our discussion of the way perceivers enact the content of what they perceive in the world is illuminating in this respect. An example of this would be when I perceive a door handle I subconsciously know that I have to turn my wrist in a certain way. This knowledge is there in order to grab the handle and move it correctly to open the door. But I do not "think" this through in a stage like process. Theis seems to happen subconsciously. I am enacting the content of this knowledge with my body in the world. In other words, I am moving in this way because my implicit knowledge of sensorimotor contingencies informs me about the future consequences of my actions. My perception of the door handle and the sensorimotor knowledge I possess about it is *a part of* my action to grab the handle in a particular way.

Chapter Two

The problem with the hard problem

David Chalmers has characterised the mind-body problem as the “hard problem” (1995, 1996). He distinguishes the hard problem from the so-called “easy problems” of consciousness and describes it as:

[...] the really hard problem of *experience*. When we think and perceive, there is a whirl of information processing, but there is also a subjective aspect. As Nagel (1974) has put it, there is *something it is like* to be a conscious organism. This subjective aspect is experience. When we see, for example, we *experience* visual sensations: the felt quality of redness, the experience of dark and light, the quality of depth in a visual field. Other experiences go along with perception in different modalities: the sound of a clarinet, the smell of mothballs. Then there are bodily sensations, from pains to orgasms; mental images that are conjured up internally; the felt quality of emotion, and the experience of a stream of conscious thought. What unites all of these states is that there is something it is like to be in them. All of them are states of experience (1995, p. 201)

Chalmers describes the "easy" problems as those that are "... directly susceptible to the standard methods of cognitive science, whereby a phenomenon is explained in terms of computational or neural vehicles". Examples of the "easy" problems that Chalmers gives (also in his 2005, p. 201) are:

- The ability to discriminate, categorize, and react to environmental stimuli;
- The integration of information by a cognitive system;
- The reportability of mental states;
- The ability of a system to access its own internal states;
- The focus of attention;
- The deliberate control of behavior;
- The difference between wakefulness and sleep.

Chalmers claims that what separates the "hard problem" from the "easy" problems is that the former seem to resist the methods of cognitive science in a way that the latter do not. This means that the problem of experience, the subjective "what it is like" feature of having an experience cannot be explained or accounted for by computational processing or neural vehicles. But explaining the "reportability of mental states", or, "the deliberate control of behaviour" is not difficult to do in these terms.

For example, it is clear to me right now that that there is something it is like for me to experience the red mug on my desk, and equally there is something it is like for me to feel hot next to the window with sun streaming in. Indeed it seems wrong to be an eliminativist about these states of experience. They are there for me and it seems silly to try to deny them. As Noë and O'Regan nicely put it, "It is the presence or absence of this distinctive qualitative state that makes it the case that there is, in the phrase of Nagel (1974), something that it is like to experience red. Unless we can account for this, we have failed to explain perceptual consciousness" (2001, p. 95). But by suggesting that these states are not explainable in computational or neural terms Chalmers makes them a mystery for cognitive science.

So mental states such as seeing red, and feeling pain all have a particular "something it is like" to be them. That there is "something it is like" to experience the colour red or to feel pain seem to resist explanation in terms of the methods used to solve the easy problems. The problem that the hard problem articulates is that a description of consciousness that accounts for subjective qualitative feeling is needed. But at present there appears to be no such explanation. If at present there is no physical or objective explanation of these mental states then does this mean that these mental states are irreducible to objective facts or physical processes? To see why Chalmers argued for an affirmative answer to this question, consider how first person data are related to third person data, (where first person data are subjective facts and third person data are objective facts).

The standard practice in science employs a reductive methodology to explain a given phenomenon. For example, DNA molecules explain the function of transmitting hereditary characteristics from generation to generation. But unlike this sort of third person data, first person data, (the "what it is likeness" of an experience) does *not* seem to be reducible to objective functioning. This is because even when all the objective functions are explained, such as the reportability of mental states or the deliberate control of behaviour, (the "easy" problems), a further question still remains: Why is all this functioning associated with conscious experience? First person data don't seem to be reducible to third person data. We have a hard problem of *how* and *why* conscious experience comes with cognitive processes in the brain. The failure of a reductive explanation for first person data can be shown in the following schematic form:

P1-Third person data are data about objective structures and functions

P2-This data is about the microscopic structures and functions of things.

P3- Explaining such objective structures and functions does not suffice to explain first person data.

Therefore,

C1-First person data cannot be entirely explained in terms of third person data.

This is how Chalmers seems to argue for the conclusion that first person data to do with the qualities of experience are irreducible to physical facts or processes. The guiding premise is that there is something it is like to have a phenomenal experience. And from this premise the possibility of giving a physical or objective description of these phenomenal facts is denied. The “hard problem” shows how first person data is not describable by objective facts in the same way that third person data is.

But the problem with the hard problem is that it is based on the assumption that all conscious experience is generated internally in the head. That the hard problem is based on the assumption that conscious experience is generated in the head is shown when Chalmers says; “even when all the objective functions of the brain are explained, such as the reportability of mental states or the deliberate control of behaviour, (the “easy” problems), a further question still remains: Why is *all this functioning* associated with conscious experience?” Chalmers’ claim is that the methods of *cognitive science* that could solve the easy problems do not work for solving the hard problem. And this is what leads him to argue for the existence of qualia.

How qualia generate the hard problem

But I think that one can only say that there is a hard problem if one agrees that there are qualia. Qualia, on my view, are what generate the hard problem. Qualia generate the hard problem because if experience has qualia then internalism must be true. Internalism is true if experience has qualia because qualia are said to be intrinsic properties of experience. If they are intrinsic properties of experience this means an experience can have its qualia independent of any relation the organism stands into the environment.

But what happens when we move away from the idea that phenomenal consciousness must be intrinsic to the organism? What happens if we explain phenomenal consciousness in terms of skilful processes that are world involving? To say this is to say that there is a skilful alternative to internalism, and that this skilful alternative can explain how one gets phenomenal consciousness in terms of processes that are not all located internally within the head. The skilful alternative that I see to fit the bill here is the sensorimotor theory. Before I show how the sensorimotor theory fits the bill, though, I want to make this stage of the argument a bit clearer. We know what the hard problem is. But why do I say that qualia generate it?

We can take qualia to have four of the following main properties:

1. Intrinsic- they are non-relational properties. That means they are contained wholly within the organism itself. They do not change depending on the experiences relation to other things.
2. Ineffable- that is to say that they cannot be communicated by means other than by direct experience.
3. Essentially subjective or private- it is not possible to systematically compare qualia with other people.
4. Introspectable or directly or immediately apprehensible in consciousness- that is to say that an experience of a quale *is* very much an experience of a quale, and to experience it is to know everything there is to know about it.⁸

I have an issue with the first of these properties. The issue is with the idea that qualia are intrinsic.

If qualia are intrinsic properties then this means that they are non-relational. If qualia are non-relational then this means that they are contained entirely within the organism and depend entirely on processes within the organism. This would be to say that internalism is true. What is internalism?

Internalism is the view that conscious experience can be explained in terms and processes that are all located within the organism or inside the head. This is to say that these processes can explain the phenomenal feels of objects in the world.

If experience have qualia then internalism must be true. But internalism cannot be true because we can explain the phenomenal feels of experience in terms of processes that are not all individuated in the head.

We have made two connections here. The first is that qualia generate the hard problem and the second is if qualia exist then internalism must also be true. If qualia are true then internalism is true because qualia are intrinsic to experience. But we cannot say that internalism is true because the phenomenal feel of experience can be explained in terms of processes that are not all individuated in the head. If the phenomenal feels of experience can be explained in terms of

⁸ See Micheal Tye's Stanford Encyclopdeia of Philosophy entry on Qualia:
<http://plato.stanford.edu/entries/qualia/>

processes that are in part external to the organism then this makes internalism incorrect. This in turn means there are no qualia. In order for this argument to go through we need to further show that internalism is incorrect. One way to do this is to say that vision is skilful.

The skilful alternative to internalism

I now want to be more explicit about how the sensorimotor theory considers vision to be a skilful activity. With this discussion we will see one way in which the sensorimotor theory can disprove internalism.

In chapter one we discussed the ways in which one enacts the content of their experience of the environment to successfully guide movement. The example of Balka's Black Box was used to illustrate this point. Noë says "we gain content by looking around just as we gain tactile content by moving our hands. You enact your perceptual content, through the activity of skilful looking" (p.73). The point of that discussion was to show how one uses sensorimotor knowledge to guide movement. The point of this discussion is to show how one's skilful interaction with the environment can disprove internalism.

Noë says that the way in which one experience's something as having a phenomenological feel or a certain quality is brought about by the "activity of skilful looking" on the part of the perceiver. But the phenomenal feel or certain quality that something has is not something separate in itself, as distinct from one's activity of skilful looking. For example, there is nothing to the colour red *as the colour* red that can be explained in abstraction from the activity of looking at something that is red⁹. This is the case because experience is an activity consisting of one's sensory exploration of the environment. What this means is that one's experience of the colour red lies precisely in this act of visually exploring a red surface. On this view, perception and the phenomenal experience it brings about is a skilful activity enacted in the interactive give and take with the environment. And it is with this skilful activity that one associates phenomenal character.

What this shows is that experience need not be wholly derived from brain activity. In many cases experience is enacted through the perceivers interaction with the environment¹⁰. And it is this denial that experience is wholly derived from brain activity that makes the sensorimotor theory

⁹ One could respond to this, however, by saying that one can experience the colour red even when one is not looking at the colour red. An example of this would be after-images or dramatic hallucinations. These cases could prove difficult for Noë because after-images or dramatic hallucinations do not require any sort of skilful looking.

¹⁰ Cases in which one could argue that experience is not enacted through a perceiver's interaction with the environment include dreams and hallucinations. We have said that this idea could also be problematic for the enactivist because he wants to say that experience is brought about through the act of skilful looking.

incompatible with internalism. Internalism is denied because experience is enacted and phenomenal experience is the result of this external interaction between perceivers and their environments. We need to flesh this out in more detail to understand entirely what this means.

I want to support the thesis that says vision is skilful by using colour constancy as an example of what Noë (2004) has called “presence in absence”. I want to say that one would not experience colour constancy if one did not see in a way that was skilful. What is colour constancy? Colour constancy is a feature of one’s colour perception that ensures that the perceived colour of objects remains relatively constant under different lighting conditions. Bertrand Russell gives a nice example of this:

And we know that even from a given point of view the colour will seem different by artificial light, or to a colour-blind man, or to a man wearing blue spectacles, while in the dark there will be no colour at all, though to touch and hearing the table will be unchanged (1912 p. 3).

Here Russell points out the ways in which things appear varies in relation to its light source. Noë’s example of this is the way a red tomato indoors may appear darker in colour than in the sun or when seen in artificial light. But notice also that colours change their appearance in relation to their neighbouring colours. For example, a pink card may appear brighter or more neon-like when placed on a dark piece of card. But it will appear less bright when placed on a red piece of card that has less contrast.

But colour constancy ensures that when one perceives these changes one knows that the objects haven’t really changed colour. The red tomato appears darker indoors than in artificial light but the tomato does not really change colour. It’s just its hue and brightness that changes but the tomato’s actual colour remains the same. How does one know that this is the case?

The answer lies in the fact that we can see colour constancy as an example of presence in absence. For example, when the tomatoes hue and brightness changes in artificial light the true colour is still present. When one takes a tomato indoors and it appears lighter in colour, the tomato’s darker colour is also present in its absence. This is how Noë describes this:

Standard ways of characterizing colour constancy as a phenomenon have a tendency to explain away the fact that we experience the wall as a uniform colour even when we experience the surface as visually differentiated with respect to colour across its surface. The problem of colour constancy, then, is better framed as a problem about perceptual presence. We experience the presence of a uniform colour, that, strictly speaking, we do not see (p. 128).

What Noë means here is that the uniform experience of colour constancy that one has is a form of perceptual presence, or presence in absence. What explains this odd kind of presence is one's sensorimotor knowledge. This sensorimotor knowledge is one's knowing how the colour of the tomato will vary as one changes their point of view on it.

Consider another example of presence in absence. Imagine the scenario of looking at a cube that we discussed in chapter one. One can only ever experience the three sides that are visible, yet one knows that the cube is not hollow; one knows that moving around it would bring about the experience of the remaining three sides. In this sense one experiences the hidden three sides even though they are not visually present. What brings about this sense of presence? You know that moving the cube will bring about seeing these hidden three sides.

One can know that there is a difference between how objects appear to change colour under different light sources but that they do not *really* change colour in themselves because of an implicit knowledge about how things change with movement and how movement will bring hidden things into view. The constant colour is present in your experience in the same way as the backside of the cube. The backside of the cube is present in its absence, and the darker colour of the tomato is present in its absence when one takes it outdoors and it appears a lighter colour. That we can know that something is present even when it is hidden from our view is because of one's implicit knowledge of the sensory effects of movement.

So one's sense of the presence in absence of things is governed by one's understanding of the future sensory consequences of one's movements. The future sensory consequences of one's movement are governed by one's interaction with the environment. This interaction with the environment happens at least in part externally to the animal, beyond the animal's skull. That one possesses this implicit knowledge and uses it every day when they perceive the world shows that vision is skilful. It is difficult for me to imagine how internal mechanisms could be seen as skilful in this way without the assistance of one's body and its interaction with the environment.

If we accept that vision is skilful because of colour constancy and presence in absence, and if we accept that vision is skilful because it is governed by an implicit understanding of the future sensory consequences of one's movement, then we have just signed-up to the idea that some processes involved in perceptual consciousness are external to the organism. This would mean that internalism is in trouble. Internalism is in trouble because of the way in which we have shown that vision is skilful. And if internalism is in trouble then qualia are in trouble too. This is because qualia entail internalism by way of qualia being intrinsic. If qualia are in trouble, then so too is the hard problem.

The argument against internalism and why this means there are no qualia

We wanted to say that if experience has qualia then internalism is true. This is because qualia are intrinsic. But internalism cannot be true because of the reasons we have given in this chapter. But if internalism is not true then this means there can be no qualia.

We can show this schematically:

If Qualia (p) then Internalism, (q)

Not Internalism (q),

Therefore,

Not Qualia (p)

In accordance with modus tollens:

If p then q,

Not q,

Therefore,

Not p

Now if there are no qualia then this must mean that we have dissolved the hard problem. The problem of phenomenal consciousness is only a hard one if we take internalism to be true. Internal processes plus sensorimotor knowledge of external processes generate conscious experience.

Blinking and saccadic gaps

There are two other examples of presence in absence we can talk about. These include saccadic gaps and the problem of why one does not experience their blind spot. There is an internalist alternative that I think we need to look at in these two cases (Daniel Dennett (1991)).

When one blinks neural influx to the eye is momentarily stopped. But one still appears to have a constant and unbroken experience of what they were looking at. In this sense one experiences as present what is absent or hidden from view when one blinks. Noë's explanation for this is:

Note also that to have the sensation of red, there need actually be no excitation currently coming into the brain which by itself might correspond to red: this is the situation when we blink. Thus, unless we pay attention to the fact that we are blinking, the sensation of redness (and for that matter the sensation of seeing) does not go away during the blink [...] This is because what provides the sensation of redness is not the neural influx, but the knowledge of how the influx would change if you were to move your eyes. (2001, p. 962)

We can break this argument in the following way:

1. My computer screen (my example) does not disappear when I blink.
 2. There is something going on that brings about this image about other than neural influx, (because my eyes are closed).
 3. When my eyes are closed I know that opening them would bring about the image of my computer screen.
- Therefore,
4. The knowledge that opening my eyes after I blink will bring about the image of my computer screen accounts for the fact that the screen does not disappear when I blink.

Noë and O'Regan say that one has a sense of presence of what is hidden from one's view when one blinks because one knows that opening one's eyes will bring the image into view. In other words, I am aware of how the influx would change if I were to open my eyes.

I think the idea here is that if my constant experience of my computer screen were generated by internal mechanisms that were reacting to neural influx alone, then when this neural influx was stopped due to my blinking, my experience of the computer screen would not be present. But because I implicitly know that opening my eyes will reveal the image of my computer screen we can say that my continuous experience of it is not governed by internal mechanisms alone.

If internal mechanisms are not doing all the work but sensorimotor knowledge does play some sort of role here then we do have another reason for saying that internalism alone is insufficient for conscious experience. This is because my experience of having a complete and uninterrupted image of my computer screen is partly due to my knowledge of external processes that would bring the computer screen into view. The external processes here are, of course, opening my eyes. And this knowledge that opening my eyes will bring the computer screen into view is sensorimotor knowledge about the future consequences of this action.

But one worry that comes to mind here is to do with how Noë and O'Regan talk about the sensory consequences of movement for neural influx; the idea that one's knowledge that opening one's eyes will bring things into view. In our earlier discussion of presence in absence we characterised sensorimotor knowledge in terms of familiarity with the ways in which appearance changes with movement.

These present two different types of sensorimotor knowledge because appearances of things are on the side of objects in the world and neural influx is on the side of the perceiver. The former is the way Noë and O'Regan characterise sensorimotor knowledge in their 2001 paper and the

latter is the way Noë characterises it in *Action In Perception* (2004). Given this one could say that there is a potential ambiguity in the two different characterisations of sensorimotor knowledge. If there is a potential ambiguity in terms of the way O'Regan and Noë characterise sensorimotor knowledge then there is the question of which characterisation we ought to favour in trying to argue for the sensorimotor theory.

I think the 2001 characterisation of sensorimotor knowledge in terms of saccadic gaps is less convincing for the 2004 conception I have been arguing for, (in terms of how we can motivate the sensorimotor theories externalism with the examples of presence in absence we have seen so far).

There is also a sense in which the sensorimotor theory is also on shaky ground here in terms of it being a knowledge-based theory. This is because one could argue that sensorimotor knowledge ought to be conceived of as a body of stored knowledge and thus can be explained purely internally. Clark (2006) has argued that because of this Noë “runs the risk of letting internalism in through the back door.” I think that this criticism holds to the extent that knowledge could be seen as internally stored, but the knowledge that is stored here is to do with external processes that *have* been gained by a perceiver's interaction with their environment, external processes. So in this sense one could argue that yes this body of knowledge is stored internally but external bodily processes are responsible for this knowledge. These are valid worries. But we need to bracket them because it will lead us astray from the alternative explanation for this sort of presence in absence that the sensorimotor theory faces from the internalist.

One internalist alternative for explaining presence in absence

One response the internalist may give to account for this type of presence in absence is that the brain simply “fills in” any missing information. The idea here is that when my eyes are closed for the short instance of blinking my brain fills in the gap with some sort of internal image. “Filling in” is also said to be responsible for why one does not experience the gap in their visual field that falls on their blind spot, which is also an example of presence in absence. This is an example of presence in absence because the part of the image that falls on one's blind spot is absent, (because of the blind spot), but one experiences this information as present.

Dennett (1991) denies the claim that the brain performs any sort of “filling in” activity on the grounds that this implies the existence of a “Cartesian Theatre¹¹” or “Homunculi” in the brain. This is the case because for “filling in” to occur there must be a place where this happens and a

¹¹ The Cartesian Theatre is the idea that the objects of perception are represented in the mind of the observer, and to a little “homunculus” who acts as a central commander controlling the input and output of information.

subject for whom this happens. The “Cartesian Theatre” and the little homunculi said to watch it in the head would be responsible for such roles. Indeed they need exist for "filling in" to be true, or so Dennett claims.

The idea of filling in is premised on the view that neural mechanisms are doing all the work to fill in any gaps that may be in one’s experience. This is because no neural activity is coming in from one’s retina to one’s brain at the point at which one is blinking. On the internalist’s view of filling in, then, the argument looks like this:

- a) The image of my computer screen does not disappear for me when I blink. My experience of this image is continuous and richly detailed.
 - b) There are no neural influxes coming in from my retina to my brain at this point.
- Therefore,
- c) My brain must be performing some sort of "filling in" activity, which makes my experience of the computer screen continuous.

Dennett also claims that the idea of filling in is incorrect because it assumes that consciousness is continuous, and this assumption is unwarranted. He says that consciousness is not continuous at all. Evidence for this claim consists in the very nature of the blind spot and the existence of saccadic gaps. The very fact that human organisms possess these things shows that the experience of consciousness as continuous is false.

Dennett’s rival response to this view is that the brain simply *ignores* the fact that any information is missing due to one’s blinking or the blind spot. On this view we could say that one experiences as present what is absent when one blinks because the brain ignores the fact that any information is missing during this short time.

But even if the brain is ignoring this information one still seems to experience as present what is missing. So the brain must be doing more than just ignoring the gaps. Dennett says that because the brain ignores the gaps it “jumps to the conclusion” that the image is still there because it has not received any contradictory evidence that may say that the image is not there. Dennett’s example of how one experience’s Andy Warhol’s¹² identical photographic portrait of Marilyn Monroe is a good way to illustrate this point.

¹² See appendix image [1].

Right now imagine that you are looking at lots of identical Marilyn's. The wall opposite you is covered in lots of identical Marilyn's just like in Andy Warhol's painting. I suppose that it seems to you right now as if your experience of this image is richly detailed. In respect of the fact that it seems to you as though you are seeing all of the identical Marilyn's in rich detail at the same time; you seem to experience the presence of all the Marilyn's in rich detail at once.

But Dennett thinks that one does *not* really see all of Marilyn's as present at the same time in rich detail:

It is not the case that there are hundreds of identical Marilyn's represented in your brain. Your brain somehow just represents that there are hundreds of identical Marilyn's, and no matter how vivid the impression is that you see all the detail, the detail is in the world, not in your head (p. 355).

Dennett says that this is because it is only possible for the eyes to "foveate on one or two Marilyn's" at once (p. 354). So because the eyes can only foveate on one or two of the Marilyn's at once one only really sees these Marilyn's as richly detailed and present. So why is it that one seems to experience the absent Marilyn's as present and in rich detail? To see this more needs to be said about the idea that the brain "jumps to conclusions".

Dennett says that just because there is some information that is absent in one's brain about the wallpaper due to one's blinking or the existence of the blind spot this does not mean that somewhere in the brain there is *information about the absence* of these Marilyn's, "Absence of information is not the same as information about absence", says Dennett (p. 359).

There is no information in the brain about the absence of Marilyn's that fails to hit one's fovea at the time of focus, even though there is in some sense an absence of information. The brain *jumps to the conclusion* that there are hundreds of identical Marilyn's because it does not receive any contradictory evidence from a region, (it does not get any information about absence). Given this, it continues with its generalization that there are hundreds of identical Marilyn's.

So because the brain has identified one Marilyn, and has not received any other contradicting image such as the image of Elvis Presley, for example, the brain labels the whole region "many more Marilyn's". This is how the brain experiences the presence of the Marilyn's that are absent.

So in a similar way the fact that one fails to notice their blind spot does not show that consciousness is continuous, but shows that the brain is *ignoring these holes*. The brain does not have any information about an absence that is missing because of the blind spot. As Dennett says, "the brain has not developed any epistemically hungry agencies demanding to be fed from

that region" (p. 355). In other words, the brain neglects the area of the blind spot. The brain does not have to "fill in" this missing Marilyn because the "region in which the blind spot falls is already labeled "Marilyn"", given that there are no Elvis Presley's.

So in terms of presence in absence, one experiences as present what falls on one's blind spot because the brain ignores the holes and jumps to the conclusion that this information must be present.

So Dennett offers a rival account of presence in absence in terms of countering the idea that experience seems continuous and richly detailed. On Dennett's view, one's illusory experience that consciousness is continuous and richly detailed is in virtue of the fact that the brain ignores any gaps by jumping to conclusions based on what is already present. So one experiences the presence of what is hidden in rich detail and in a continuous fashion because the brain jumps to conclusions based on what it already knows from its foveation.

But in Dennett's case it is still the brain that is ignoring gaps and jumping to conclusions. If Dennett is correct then this is problematic for the sensorimotor theory because the vehicles that are still essentially doing the work are internal to the organism.

But we can see Dennett's alternative explanation of presence in absence as dissatisfactory. Like Noë (ch2, especially p. 54-55) I want to argue that only if we conceive of vision as snapshot like does Dennett's argument succeed. Now we can object to Dennett's objection to Noë on why one has a sense of presence in the absence of these things.

Why vision is not snap shot like

Dennett is right to say that experience is not generated by an internal Cartesian theatre, that there is an internal theatre by which one experiences a detailed and unified representation of the world. The idea that the brain fills in any missing information is invalid on these grounds. But Dennett's idea that the brain jumps to conclusions and makes the generalization that experience is richly detailed only seems comprehensible to some extent. It is only comprehensible to the extent that visual experience is conceived as whole and as "snap shot" like. To the extent that the snapshot theory of vision is true then it could also be true that the brain is ignoring gaps in the neural influx that is coming in from the visual field. For example, if it is correct that one seems to have a complete visual experience of all the Marilyn's at once, yet vision science tells us this is not possible (we can only foveate on one or two Marilyn's at one time), then the alternative to filling in could be ignorance on the brain's behalf.

The problem, however, is that this “reasoning is based on a bad inference from the experience of one single fixation of an image to the supposed character of seeing in general” (Noë p. 57). It is *not* the case our phenomenology gives us all the detail that is present in one single fixation. Vision is not “snap shot” like (Noë ch, 2 especially p. 54-55). Mach’s drawing¹³ of the visual field neatly captures what is meant by the idea that vision is snap shot like. The image is meant to be a depiction of what seeing the room that Mach has drawn *is like*. As Noë says, Mach’s drawing is “a treatment of the visual experience itself [...] Mach’s drawing represents visual experience as sharply focused, uniformly detailed, and high-resolution” (p. 34-35). The idea is that the visual world is represented in consciousness in full detail in a snap shot.

We know that Dennett describes the experience of all the Marilyn’s to be somehow present all at once because the brain jumps to conclusions: “It seems to you as if you are actually seeing hundreds of identical Marilyn’s... you have jumped to the conclusion and thereupon *see* hundreds of identical Marilyn’s”. We saw how this is about presence in absence because all the Marylins are present but you are not seeing them all at once because of the way the eyes foveate; they are present in absence. Look at the wall ahead, however. What *is* represented in detail is what you are looking at that is directly in your field of focus (the part of the wall that matches your foveal region). But the detail of what surrounds your direct focus is not sharply and clearly represented in such high-resolution detail.

Like Noë I think Dennett’s thesis is based on the inference from the idea that consciousness is presented in sharp focus. When one looks at the wall ahead, however, and really pays attention to what is in sharp focus, what one notices is that all that is presented in sharp focus is what is directly ahead. So the brain may indeed generalize that all the Marilyn’s are in crisp sharp focus because the brain jumps to this conclusion, but when one really looks at how their conscious experience is it is clear that the complete image is not in crisp sharp focus at all.

If Dennett’s reasoning is based on a bad inference from the experience of one single fixation to the nature of seeing in general then his alternative explanation of presence in absence may fail. To see that his reasoning may be based on a bad inference to the nature of seeing in general imagine a scenario in which one is looking at two lines that are separated by a gap that falls on one’s blind spot. Because the gap in the line falls on one’s blind spot it appears as if one is seeing a single unbroken line¹⁴. The question I want to ask is would a broken line presented in this way be phenomenologically indistinguishable from an unbroken line?

¹³ See appendix image [2].

¹⁴ See appendix image [3].

Possibly not. I think the experience of a real unbroken line drawn on a sheet of paper is not the same as the unbroken line that is experienced when you move the broken line to the place in your field of vision that matches your blind spot. This is because when you appear to see an unbroken line in the experiment you are not *really* seeing an unbroken line. Rather, you appear to see an unbroken line because the break in the line that you previously saw is now hidden from view. It is hidden from view because of where the line now falls on your blind spot.

This could mean that the broken line case is best explained in terms of the blind spot getting in the way. This would be to say that the blind spot gets in the way of the gap as opposed to the idea that the brain ignores the gap.

So because the blind spot gets in the way of the break in the line, it disappears so as to make the broken line now appear unbroken. In this sense the blind spot is just an obstacle that is in the way. This claim does need further validation. Indeed both Dennett's view that the brain ignores the blind spot and my view that the blind spot is in the way could both work. We can further show that vision is not snap shot like with the following.

The possibilities of looking

Seeing vision as an exploring activity shows that vision is not snap shot like. Once we think of vision as exploratory this challenges the claim that the brain represents what one sees all at once. Furthermore, the possibilities for exploring are unbounded. Because of its unbounded nature and because vision is a constant activity that is forever in flux we do not experience the world by means of snap shot pictures. This means there is no perfectly represented image performing centre stage on your internal Cartesian theatre.

On the contrary, because vision is an exploring activity we can experience all of the Marilyn's as present because our eyes can saccade actively dancing and darting around the image ever so quickly. The dancing and the darting is the eye exploring. Because of this one experience's the Marilyn's as present because one can access them readily through this kind of darting and dancing activity of the eyes. One has the possibility for skilful looking. Vision as an exploring activity, (or active vision) is a statement of the sensorimotor view. However, we must bracket a full discussion of active vision here because this would mean going off track and in a direction for which we do not have enough space. But from the principle of active vision we must take the following: When we do not look around we do not see. But we have the possibility of looking around. We can explain the presence of things that are hidden from view because of this possibility.

Vision, therefore *needs to be active*; one must explore the world in order to properly see it. Sensorimotor knowledge is implicit in this exploration, for one knows that moving and looking around in such a way will reveal the rest of the phenomena that is present. You are not given everything all at once. But you know that moving in such a way will reveal the rest of what is out there. How you explore the environment, therefore, contains this implicit skill. And this implicit skill is guided by the external activity of the body.

One nice analogy we can make to illustrate active vision is with Merleau-Ponty's idea that seeing is like "palpation with the eyes". When I think about this claim I think of the eyes brushing over everything they see. In a metaphorical sense my eyes palpate my keyboard as I type and the screen as I review what I have written:

Vision is touch-like. Like touch, vision is active. You perceive the scene not all at once, in a flash. You move your eyes around the scene the way you move your hands about the bottle.... We gain content by looking around just as we gain tactile content by moving our hands. You enact your perceptual content, through the activity of skilful looking (p.73).

Recall the example of haptic perception that we talked about in chapter one to show how perception and action are interdependent. Here Noë mentions the example of the blind persons experience of the bottle as a way of showing that his perception of the bottle is skilful and active. Without the blind person actively exploring the bottle and coming into contact with it the blind person would not gain any representational content about the shape and feel of the bottle. But because the blind person has the possibility to actively and skillfully explore the bottle he can acquire this content. Merleau-Ponty's point is that the eyes bring themselves into contact with things in the same sort of way. How we have objected to Dennett's view? We have said that Dennett's view can be objected to for the following two reasons:

1. Dennett's idea that the brain jumps to conclusions is still an internal one.
2. But fortunately it is not an internal one that works. It does not work because vision is not snapshot like.

Chapter Three

The Knowledge Argument

In a similar way to Chalmers' hard problem Frank Jackson's (1986) knowledge argument tries to show that conscious experience involves something non-physical like qualia. Jackson does this by means of a thought experiment starring a colour scientist called Mary. He uses the thought experiment to argue that there is an explanatory gap that has its origins in the falsity of physicalism. The thought experiment about Mary goes like this.

Mary is a vision scientist who has never experienced the outside world. Mary lives in a black and white room investigating the world through a black and white TV. Mary has been taught all the physical facts about the world, its makeup, and its colours. This includes knowledge about all the fundamental principles about sight such as the transgression of wavelengths to the retina. One day, Mary is released into the outside world and sees a red rose for the first time. The question is whether or not Mary learns anything new. According to Jackson (1986) Mary does learn something new: she learns for the first time "what it is like" to experience red from her first person perspective. What Mary learns must be something different from all the physical knowledge that she had about colour experience whilst she was in the black and white room. She knows by hypothesis all the physical facts about colour experience. Thus what she comes to know must be something different from any physical fact. It seems to follow that there is a gap between what we can know about colour experience from knowing the physical facts and what we can know about colour experience by undergoing colour experiences in the first-person.

According to Jackson, the case of Mary is supposed to show that not all facts about experience can be explained by physical facts. It is the phenomenal character of seeing the colour red that Mary instantiates for the first time when she sees a red rose, and the suggestion is that this phenomenal character cannot be explained by physical facts.

The argument goes like this: If we accept the premise that Mary knows all the physical facts about colour before she enters the outside world, and also accept that Mary learns something new, it follows that this something new is not describable in physical terms because Mary supposedly knew everything describable in physical terms. The inference from the fact that Mary knew everything physical about colour vision to the fact that Mary learnt something new when she saw a red rose thus seems to show that physicalism must be false. There was something about colour experience that Mary did not know before she left the black and white room. All the physical facts that Mary knew were missing some sort of explanatory power; the power to explain the phenomenal character of experience, the subjective "what it is like" to see red.

Suggesting that this phenomenal character cannot be described in physical terms entails that such facts are not knowable before experience. It is not possible to know what it is like to see a red rose before we see a red rose; there are no physical facts that can give us *a priori* knowledge of qualitative character. Even when all the physical facts are known there is something extra that needs to be considered in the description of phenomenal character that cannot be described in by physical terms.

In this chapter I will use the following schematic version of Jackson's argument of the explanatory gap:

- a) Mary knows all the physical facts about vision and colour experience.
- b) Upon leaving the black and white room Mary learns something new in the form of the qualia that are associated with experiences of seeing red objects.

Therefore

- c) The qualia that are associated with experiences of seeing red objects are non-physical facts.

Jackson says Mary learns something new in the form of qualia that are associated with experiences of seeing red objects. From this together with premise (a), the premise that she knows all the physical facts about colour perception, it follows that what she learns about colour perception is not a physical fact.

This is true if we accept the inference from (a) to (c). If we accept that Mary knew everything physical, and if we accept that Mary learns something new, then it must be the case that there is something that physicalism cannot accommodate. The something that physicalism cannot explain is the "what it is likeness" or qualia that Mary experiences for the first time when she leaves the black and white room.

But I think we can only warrant the move from (b) to (c) if internalism is true. This is given what we said in chapter two about qualia being intrinsic to the organism. That qualia are intrinsic to the organism is an internalist claim. So because qualia are intrinsic to the organism and something being intrinsic to the organism is a feature of internalism we can say that conclusion (c) generates internalism.

But we know that the sensorimotor theory rejects internalism and can disprove it in many ways (ways we saw in chapter 2). So in virtue of the sensorimotor theories rejection of internalism we cannot accept the conclusion of the original knowledge argument.

The good thing is that we can generate a non-internalist version of the knowledge argument that instead talks about Mary knowing all the physical facts relating to how perceivers interact with coloured objects. This would mean stating a new premise (a) and a new premise (b) which will entail a new definition of phenomenal knowledge.

But first we need to say why acquaintance with the colour red is necessary for Mary to get phenomenal knowledge that is different to what Jackson thought.

Why is acquaintance necessary for phenomenal knowledge?

We know that Jackson says Mary sees what the colour red is like when she leaves the black and white room because of a non-physical fact or qualia. This is what Jackson wanted to say with his version of the knowledge argument to prove that phenomenal knowledge was achieved by Mary's seeing qualia. So for Jackson, acquaintance with the colour red is necessary in order for Mary to get phenomenal knowledge in virtue of Mary seeing qualia. But we have seen how we can reject that there are qualia.

I want to say that acquaintance with the colour red is necessary in order for Mary to acquire practical skills or practical knowledge because this generates phenomenal knowledge. With this idea we can then say that phenomenal knowledge is the result of a perceiver's interaction with the environment. This would be in accordance with the sensorimotor theory. When she is able to interact with the colour red Mary acquires the sensorimotor skills that bring about the phenomenal knowledge of what seeing red *is like*. Mary did not have this type of knowledge whilst she was in the black and white room because the colour red was not available for her to interact with; she could not acquire the practical knowledge about how colours and objects vary in their appearance as she moved in relation to them. So Mary needs to be acquainted with the colour red in order for Mary to gain these sensorimotor skills that bring about phenomenal knowledge. What does Mary already know in the black and white room?

Mary has theoretical knowledge in the black and white room. This theoretical knowledge that Mary has in the black and white room would include information about the way the appearances of colours *would* vary and *would* behave given certain circumstances and with her movement and perspective on the object or colour. Her theoretical knowledge would have also included the information about the way that light interacts with different surfaces in different settings. But the theoretical knowledge does not give Mary the phenomenal knowledge of what it is like to see the colour red. Mary needs to be acquainted with the red rose in order for her to acquire the sensorimotor skills she needs for phenomenal knowledge.

The upshot of saying that phenomenal knowledge is generated in this way is that the sensorimotor theorist may not face the same problem as the vehicle internalist (who wants to say that experiences are brain states) of trying to get phenomenology out of these brain states. The sensorimotor theorist may not have this problem because he can show how phenomenal consciousness is enacted in one's interaction with their environment. In chapter two we showed how the sensorimotor theory can account for phenomenal consciousness in this way by getting rid of qualia.

The sensorimotor theory claims that the sensorimotor skills that Mary learns are required for conscious perception. We can call these sensorimotor skills "know-how" or procedural knowledge. You have to have certain skills in order to consciously see. One can think of these skills in terms of access. For example, in thinking about presence in absence, you have an experience of the presence of the hidden sides of things because you know how to access what isn't currently visible to you. The sensorimotor theory says this knowledge is something you have when you have mastery or familiarity with sensorimotor contingencies. Chapter two's discussion of colour constancy and occlusion in vision was illuminating in this respect. We saw that one has a sense of colour constancy or occlusion in vision in virtue of their sensorimotor skills.

We can further emphasise the claim that acquaintance is necessary for phenomenal knowledge by noticing that Mary's entering the outside world is *not* the first time she sees colour. Jackson cleverly leaves out the obvious fact that black and white are colours that Mary has seen to make the idea that Mary sees colour for the first time when she leaves the room more intuitive. But Mary has already seen two colours, namely, black and white, in her black and white room. So because black and white are present in the room, Mary can use her "know how" to skillfully identify the colours black and white and see how they vary in their appearances with her movement and point of view on them. Because Mary has been acquainted with these two colours in the black and white room we can say that she has phenomenal knowledge of the colours black and white.

But the point here is that the colour red is not present in the black and white room. This means that Mary possesses the relevant theoretical knowledge about the colour red but not the "know how" or practical skills that she needs to generate her phenomenal knowledge of the colour red in the way that she has with the colours black and white.

So what Mary learns when she leaves the black and white room must be important for phenomenal knowledge. Only by being acquainted with the red rose and learning the practical skills as defined by the sensorimotor theory can Mary get the phenomenal knowledge of what it is like to see the colour red.

If we accept that Mary gets phenomenal knowledge in this way then we now have a new way of stating premise (b):

b₂) Upon leaving the black and white room Mary is acquainted with the colour red and gets phenomenal knowledge by mastering her sensorimotor skills.

Now what would premise (a) in the knowledge argument become? Premise (a) in the knowledge argument would become:

a₂) Mary knows all the physical facts about a perceiver's interaction with the environment.

My new version of the knowledge argument

Now we have two new premises for the knowledge argument. Schematically this looks like:

a₂) Mary knows everything there is to know about a perceiver's interaction with the environment.

b₂) Upon leaving the black and white room Mary is acquainted with the colour red and gets phenomenal knowledge by mastering her sensorimotor skills.

But presenting the premises like this articulates that there is an equivocation on knowledge between what Mary knows before she leaves the black and white room and what Mary learns when she leaves the black and white room. We saw this come up in our explanation of what Mary knows and what Mary learns in the previous section, but here it is clearer. a₂) is theoretical knowledge, "knowing that" and b₂) is procedural knowledge, "knowing how". A definition of these two types of knowledge would be:

- "Knowledge that" is theoretical or knowledge that concerns facts. An example of something that gives theoretical knowledge would be instructions about how to bake a cake. This type of knowledge can be prescribed *a priori*.
- "Knowing how" is a procedural form of knowledge that is acquired in a practical way such as by actually baking a cake. When one has baked a cake one knows "how" to bake a cake. This type of knowledge can only be gained *a posteriori*.

An example of this equivocation on knowledge is that one could know theoretically *that this is what you do* to bake a cake given the instructions in a cook-book without ever having baked a cake themselves. So in the first sense one has theoretical knowledge about how to bake a cake, but this is different from the second instance in which one has learned in a practical way *how* to bake a cake. The two types of knowledge presented here are different.

We can translate premise (a) into premise (a₂) because premise (a) is just a claim about Mary's knowing all the physical facts about colour experience. And on the sensorimotor theory this just translates to the idea that Mary knows all the physical or theoretical facts about a perceiver's interaction with their environment: (a₂) attributes theoretical knowledge to Mary.

Premise (b) becomes (b₂) because the sensorimotor theory allows that Mary acquire some new knowledge when she leaves the black and white room. Mary learns something new about a perceiver's interaction with the environment by mastering her sensorimotor skills. We know it is this practical skill that would get her phenomenal knowledge of the colour red. We know that in order for Mary to get phenomenal knowledge of the colour red Mary needs to be *acquainted* with the red rose.

But the problem is that if Mary knows all the physical facts about a perceivers interaction with the environment, yet Mary still learns something new when she leaves the black and white room, then this means that there must be facts about experience that are not about a perceivers interaction with the environment. Knowing that colours and objects vary with movement does not give phenomenal knowledge because phenomenal knowledge is only achieved when one learns the sensorimotor skills when they are acquainted with the phenomena in the world. Now conclusion (c) becomes:

c) There are facts about experience that are not about a perceiver's interaction with the environment.

So this new version accepts both the original premises (a) and (b) from Jackson's version of the knowledge argument. We can make the inference from (a₂) to (c₂) if (a₂) and (b₂) are true. (a₂) is just a translation of premise (a), which says that Mary knows all the physical facts about a perceiver's interaction with their environment. We can say that (b₂) is true in virtue of what the sensorimotor theory says about how one needs to interact with the environment to acquire practical sensorimotor skills, (note that this idea of interaction is one that we used to get rid of the internalist move from premise (b) to (c) in the original knowledge argument). If we accept (a₂) and (b₂) then (c₂) must be true. But if (c₂) is true then this means that the sensorimotor theory has it's own gap.

The sensorimotor theories own gap is that there are facts about experience that are not about a perceiver's interaction with the environment. In the same way that Jackson's knowledge argument showed that there is something about experience that cannot be described in physical terms the new knowledge argument shows that there is something about experience that cannot be described in sensorimotor terms. This is problematic for the sensorimotor theorist because there is still something about experience that he has not explained.

Knowledge how \neq Knowledge that

We have established that (a₂) and (b₂) are different types of knowledge. And we have established that (a₂) is insufficient for giving the type of knowledge that is needed for (b₂). This means “knowledge that”, theoretical knowledge, is not the same as “knowledge how”, which is gained by one’s practical interaction with the environment. So this means that only if one gains practical knowledge can one gain sensorimotor skills, and in gaining these sensorimotor skills one gets phenomenal knowledge. But gaining sensorimotor skills from “know how” is only possible when one is acquainted with phenomena in the world.

Thus, our new version of the knowledge argument shows an equivocation between “knowledge that ” and “knowledge how”. This is why when Mary leaves the black and white room she has all the theoretical knowledge but this is different from the “know how” that she needs to generate phenomenal knowledge of the colour red.

Back to experiential blindness

In chapter one we said that one’s situation inside Balka’s black box is very similar to the situation that one has when they are experientially blind. Remember that experiential blindness is the idea that even when one has some sort of visual impression what one sees is bleached of content.

Because what one sees is bleached of content one does not properly understand what the environment around one affords for movement. Now I think we can say that Mary has a low grade form of experiential blindness for colours before she leaves the black and white room. This is in virtue of what we have said about her theoretical “knowing that” being different from the new “knowing how”, and because of the skills that she learns when she is acquainted with the red rose which give her phenomenal knowledge.

We can support the claim that says Mary is partially experientially blind before she leaves the black and white room by comparing her situation to S.B.

Like the restored vision of a cataracts patient, Mary’s visual abilities are not impaired when she enters the outside world. We know that Mary lacks the sensorimotor skills and thus phenomenal knowledge at this stage. Our discussion of S.B demonstrated that although the cataract surgery restored S.B’s visual sensation immediately after the operation he didn’t have visual impressions with world presenting content. We said that this was because he lacked a certain kind of sensorimotor knowledge. S.B had rich visual sensations of his doctor’s hands and the windows facing the hospital, but he was unable to make sense of what he saw, (he thought the doctors hands were the hands of the devil). From this discussion we ascertained this was because S.B’s visual sensations were bleached of content.

Given time and directed attention S.B became more able to integrate what he saw with his patterns of movement and thought. Because of this he became more able to understand the sensory significance of his impressions. I think that it is at this point that S.B got phenomenal knowledge.

S.B got phenomenal knowledge at this point because he had acquired the necessary skills that made it possible for him to integrate his sensorimotor knowledge with his movement and understand the consequences of his movement. In other words, what S.B saw would have started to regain content when he acquired these skills, (he would have realised that the doctors hands were not the hands of the devil). S.B acquires the skills to get proper phenomenal knowledge that is not confused in a similar way to how Mary learns the skills to get phenomenal knowledge of the colour red.

We can also show that Mary has a low grade form of experiential blindness before she leaves the black and white room because whilst she is in there she will fail to have colour constancy. We know that one's implicit understanding of sensorimotor contingencies and sensorimotor skill generates one's knowledge of colour constancy in that colour constancy is an example of presence in absence..

But we have shown that Mary lacks the *practical* sensorimotor skills that would govern the understanding of colour constancy before she leaves the black and white room. We can say, therefore, that Mary does not have colour constancy before she leaves the black and white room. Let's lay this argument out schematically:

1. One must have acquired practical sensorimotor skills in order to get colour constancy.
2. Before Mary leaves the black and white room Mary lacks practical sensorimotor skills associated with the colour red because she has only limited acquaintance with coloured objects.

Therefore,

3. Mary's experiences of red objects do not exhibit colour constancy.

For example, Mary has not experienced how shining a light on a red card may make the card appear pink even though she has the theoretical knowledge that this would happen. Because Mary has not been acquainted with a red piece of card and seen these effects she has not learnt the necessary sensorimotor skills. This means that Mary would not have a proper sense of colour constancy of the red tomato either. She would not understand that the tomato doesn't really change its colour because of different lighting conditions, in the sense that the tomato's real colour is still present but it is present in its absence.

One may have noticed that our new version of the knowledge argument means that Mary doesn't have normal colour experience as soon as she sees the red rose. Mary does not have normal colour experience as soon as she sees the red rose because it takes some time for Mary to learn how to use this knowledge skilfully. It takes some time for the practical knowledge that she will gain when she interacts with the red rose to become *implicit* in the way that the sensorimotor theory says that skills are implicit. To illustrate this point consider that it takes a while for one to learn to drive a car properly. One does not instantly learn how to drive a car the minute they are acquainted with the car and find themselves in the driving seat. One may have some background theoretical knowledge about how a car works before one learns to drive, but the skill that it takes to learn to drive a car takes time and practice. Once one has learnt to drive and has been driving for a while, however, one's driving skills become implicit. They become implicit in that one does not have to methodically *cognize* or think about how to drive.

That Mary does not have normal colour experience as soon as she sees the red rose is a controversial claim. It is a controversial claim because on Jackson's version of the knowledge argument it is assumed that Mary does have normal colour experience as soon as she sees the red rose. But The SM theory claims that acquaintance is necessary for phenomenal knowledge because the phenomenal character of an experience is determined by the interaction between the perceiver and the environment. To the extent that the perceiver is engaged in an interaction this will suffice for a certain kind of experience of redness. However the experience will lack colour constancy.

But I think the idea that Mary doesn't have normal colour experience as soon as she sees the red rose is less of a problem for us than it is an indicator of just how wide the gap is. It's just that Jackson framed the gap in such a way that generated an implausible solution. Now, however, we have reframed the gap in a way that may have given us a more plausible solution to how Mary can get phenomenal knowledge without it following that qualia exist, but in doing so we have ended up showing that the sensorimotor theory faces a gap of its own.

The problem of subjectivity

This is the final and concluding section of this project in which I raise the question of whether or not we can explain the subjectivity of colour experience in terms of a perceiver's interaction with the environment. This is an outstanding question because we know that the sensorimotor theory wants to say that phenomenal knowledge is generated by a perceiver's interaction with environment, (even if it does face a gap its own). So if it is true that phenomenal knowledge is generated by a perceiver's interaction with the environment then we must be able to explain subjectivity in this way too.

This issue arises in response to problem articulated by Thomas Nagel (1974), and his worry about finding room for subjects and their point of view in an objective account of the world. My intention here is not to try and solve this issue. I want to show why this is a problem for the enactivist, and what I think would be a good way to pursue the issue in the future.

What is the Nagel problem?

How does Nagel argue that there are subjective facts, and what are his reasons for saying that they are from a particular point of view? Regarding the first issue Nagel says:

[...] fundamentally an organism has conscious mental states if and only if there is some thing that it is like to be that organism- something it is like for that organism (p. 323).

This means that:

1. I have conscious mental states (p) if there is something it is like for me to be an organism (q).
2. Experience and phenomenology tells me that there is something it is like to be me (q).

Therefore,

3. I have conscious mental states, and there is something it is like to have them (p)).

Regarding the second issue Nagel says:

Whatever may be the status of facts about what it is like to be a human being, or a bat, or a Martian, these appear to be acts that embody a particular point of view (p. 325).

From the fact that experience is always from the singular point view of the observer we can say that there is something it is like for you or I to have this experience. Saying that my experience is had from my point of view is another way of saying that experience is embodied from a singular perspective. The alternative is to say that we are mistaken about our experience and qualitative or subjective facts only seem to but *do not* embody a particular point of view. In which case there is something that my experiences are like that is different to how they appear to me. And this seems intuitively false.

The problem is that if it is true that subjective character is only accessible from one point of view then how is it possible that this character can be described in objective terms? This is Nagel's specific point about the difficulty on faces in trying to imagine what it is like to be the subject of another species, such as *what it is like to be a bat*: because subjectivity is from a point of view that is particular to the observer it is not possible to access or describe this subjectivity from another point of view, but this kind of access is required for objective description¹⁵.

¹⁵. "The reason is that every subjective phenomenon is essentially connected with a single point of view,

The problem of imaging the subjective experience of another species needs to be bracketed because we do not have the time to address it. But the point for us is that an objective description, if it is to succeed, must account for this subjective point of view. But Nagel says objective description could not provide any sort of explanation that could satisfy this criterion. This is because any objective description of subjective facts will always take up a point of view that is separate or different from a subjective point of view. In trying to give an objective description of subjective facts, the objective description necessarily moves away from the point of view of the observer.

Why is this a problem for the sensorimotor theory?

There is *something it is like* for one to have a certain experience from their point of view. So as a perceiver who interacts with her environment and who uses sensorimotor knowledge to guide this interaction there is something *it is like* for me to do so from my point of view. My sensorimotor interaction includes a subjective qualitative aspect that gives rise to a certain phenomenological feel about the phenomena I am interacting with in the world. We have seen that Nagel articulates the worry that these subjective facts cannot be described in objective terms.

This worry holds for the sensorimotor theory because the sensorimotor theory still explains the *what it is like* features of experience in objective terms. It is just that the objective terms are expressed as a perceiver's interaction with their environment.

Recall the cases of colour constancy that we discussed in chapter two. One's sense of colour constancy was explained in terms of one's sensorimotor knowledge. One has a sense of colour constancy because one understands how colours vary and change their appearances with movement and knows that these changes are just changes in appearances and not the actual colours of things. Now the subjective aspect of what it is like for the perceiver to experience the redness of a tomato, say, is also explainable in these terms. The character of one's experience is

and it seems inevitable that an objective, physical theory will abandon that point of view" (1974, p. 326). Nagel gives an example of the following difficulty one faces when trying to imagine the experience of something of another type (or species): Someone different in type from ourselves who possessed the objective concept "lightning" and who thus understood the physical facts about lightening would only be able to understand what it would be like for someone who is the same type as them to experience lightning. But they would fail to understand the human concept "lightening", or, *what it is like* for a human to experience lightning. The important thing about this example is that he who was different in type and who understands the objective concept of lightening does so not from the point of view of someone who is human but from a point of view that is external to it. Only by experiencing lightening from the point of view of a human can one ever really know what it is like for a human to experience lightening. But still, this subjective fact is non-describable in objective terms. Objective descriptions of subjective phenomena for someone different in type will never be able to access this particular point of view because their point of view will only ever be external to the phenomena in how it appears to someone of another type.

brought about by one's sensorimotor interaction with the world (remember that this is not a behaviourist claim for reasons we discussed in chapter two).

So if it is true that the subjective character is brought about by a perceiver's interaction with the world then we could say that one's subjectivity becomes a part of one's body. This would be to locate subjectivity within the body; the subject becomes embodied. This would mean that the perceiver's perspective is embodied too. The point of view from which one experiences the world is from the body. In other words, if subjectivity is brought about by a perceiver's bodily interaction with the environment then the body becomes the subject. The perceiver is now understood as an embodied subject¹⁶.

This means that we can understand the body in two ways; the body as subject and the body becomes the body as object, (the body is object in terms of it being an objective thing in the world). We can now explain subjectivity in terms of the body and we have a body as an objective thing in the world. So have we dissolved the problem of subjectivity for the sensorimotor theory?

One could say that we have dissolved the problem of subjectivity for the sensorimotor theory because the nature of subjectivity is now defined in bodily terms and not mental terms. This could mean the metaphysical mystery that arises because there appear to be non-physical facts in one's experience has been diffused. One could say that this diffuses the mind-body problem because what we thought were problems associated with the mind now become problems associated with the body.

On the other hand one could say that this is just another way of expressing a different sort of mind-body problem. One could say that it is just another way of expressing a different sort of mind-body problem because even we say that subjectivity is an aspect of the body there is still a sense in which we haven't really explained the fundamental nature of this subjectivity in metaphysical terms. This would be to say that there is still the problem of defining the essential nature of subjectivity.

¹⁶ For Merleau Ponty "being in the world" is the most important aspect of subjectivity and experience. What it is for one to be in the world is to be an embodied subject. For example, my being in the world right now is made up by the way that I see the sky outside the window and by the way that I hear the click of the keys on my keyboard. But the way that I subjectively experience these phenomena in the world is not due to some additional act of consciousness, some additional subjective facts. Instead, my experience of these phenomena comes about by my being situated in the world as a subject that is embodied. This overcame two errors of the past: 1) The methodology of Cartesianism and Dualism, (MP claimed there was no detachment of subject from object), and 2) the abstraction of the "I" from the mind, (MP claimed the self or "I" was in the act of the human body).

But putting this metaphysical worry aside, there are some (Hannah and Thompson) who have bought into this idea of the body-subject and the body-object. To see how Hannah and Thompson have bought into this idea we need to look at what they call the “Mind-body-body” (MBB) problem.

What is the MBB Problem?

The MBB problem is the problem of how to understand the relation between one's living and lived body ((“*Leib*”) an animate body with an inner point of view) and the following two aspects:

1. One's subjective point of view, and,
2. One's body considered as an objective material thing in nature “*Korper*”.

This means that instead of trying to answer the question of why the physical gives rise to the mental, we should instead see one's consciousness and one's being as nothing more than *dual* aspects of one's *lived body*, the *Leib* and the *Korper*. The idea here is that this way of looking at the problem is metaphysically and conceptually basic- it does not encounter the paradoxes that the mind- body problem does because instead of having *dual substances* we have *dual aspects* of the one same thing.

The solution to the MBB problem is that one's subjective consciousness (1) and one's corporeal being or body (*Korper*) (2) are *dual aspects*¹⁷ of one's living and lived body, one's *Leib*. Note that a thing has dual aspects in virtue of it having two “metaphysically complementary” properties of which it is constituted. So one's *Leib* has two dual aspects, a subjective point of view or consciousness and a body as a material thing. The subjective or objective properties of these two aspects are now described as the ways in which the *Leib* conceives them, the ways in which it *ascribes* certain things either of the properties. For example:

- a. Phenomenological criterion employed in first person methods are used to ascribe mental properties to things, and,
- b. Third person criterion employed by the sciences of physics, chemistry and biology are used to ascribe objective properties to things.

¹⁷ Hanna and Thompson (p. 8) offer the following definition of dual aspects: “X and Y are dual aspects of Z if and only if (a) X is an intrinsic property of Z; (b) Y is an intrinsic property of Z; (c) X and Y are the only intrinsic properties of Z; (d) X and Y are not type-identical; (e) neither X nor Y is logically supervenient on the other; 17 and (f) X and Y are non-analytically (that is, non-logically, synthetically, or “strongly metaphysically”) necessarily equivalent”.

The phenomenological criterion employed in first person methods is another way of describing the intuitive feeling of one's body and awareness of phenomena that one has from their point of view. An example of such a phenomenological criterion employed in first person methods that Hanna and Thompson give is the "conscious feeling of life", where at a given time one feels "more or less lively". The third person criterion employed by the physical sciences allows one to ascribe physical properties or terms to physical things, such as to my own ascription of my body or *Körper*.

But one's living and lived body (*Leib*) is here also the same thing as one's being an animal. This means that every conscious individual creature is identical with his or her living and lived body, his or her *Leib*. This is in virtue of the fact that one's *Leib* is constituted by one's *Körper* and one's subjective consciousness: they are the two dual aspects of what it is to be a living and a lived body. Thus, to be a *Körper* and to have subjective consciousness is the same thing as to be a living and a lived body, an animal. The solution we are given to the MBB problem is an "animalist" version of the dual aspect theory. The upshot of Hanna and Thompson's solution to the MBB problem is that the living and lived body or *Leib* is neither a subjective conscious mind nor an objective material body alone. This is because an animal is instead an essential "bearer" of these two "metaphysically complimentary properties".

In other words, something has dual aspects by virtue of its being constituted by the *metaphysical complementarity* of its two aspects. So the solution to the Mind-Body-Body Problem is that neither a subjective conscious mind nor an objective material body (*Körper*) is metaphysically or explanatorily autonomous, but instead they are metaphysically complementary aspects of a *Leib* or animal. Animals are beings such that they have both mental properties and fundamental physical properties, and these properties correspondingly entail each other with non-analytic¹⁸ necessity. We call this the "animalist" solution to the Mind-Body-Body Problem (p. 9).

That one's *Leib* consists of neither subjective consciousness nor a material body alone avoids the Cartesian definitions of the mental and the physical in terms of each belonging to two separate classes of substances. The two substances now become two *aspects* of one's living or lived body or the animal that he or she is.

¹⁸ "A proposition *P* is non-analytically necessary if and only if (i) *P* is true in every member of a class *K* of logically possible worlds; (ii) *K* is smaller than the class of logically possible worlds; (iii) *K* is larger than the class of physically possible worlds; (iv) *K* includes the class of physically possible worlds; (v) *K* is the class of logically possible worlds consistent with the underlying metaphysics of our actual world; and (vi) *P* takes no truth-value in every logically possible world not belonging to *K*" (p. 8).

How does this solution help the enactivist explain subjectivity?

If consciousness is the same thing as to be a *Korper* then is where subjectivity lies too. And because one's having a *Korper*, or a body, is a part of one's *Leib* to which the animal is identical too, consciousness and perspectival subjectivity is not anything separate from the body. The fact that there is something it is like for an organism to undergo certain mental states can be thus explained in terms of the living body or *Korper* that essentially bears both subjective and objective properties. The first part of this statement goes hand in hand with what Merleau-Ponty said about how a subject can be located within the body- the body as a "being in the world" and the body as subject. The second part is an additional solution we get from reframing the problem as the mind-body-body problem. We now get to see this subjective fact as an essential aspect of one's living and lived body, and this subjective fact is just the way one ascribes one's experience of the red tomato this subjective property.

If subjectivity is an essential aspect of what it is to be a living or lived body and to have a *Korper* then there is no way in which it is possible to conceive of a living creature that does not undergo conscious mental states. This holds as true because of the fact that each animal is essentially embodied, conscious mental creatures are identical with them being an animal, (one's *Leib* is the same thing as one's being an animal). We can apply the law of the identity of indiscernables to qualify this claim: Necessarily, for every creature (x), (x) has consciousness or subjective experience if and only if (x) has an animate body.

Hannah and Thompson take this to be a specification of the general topic of animalism (p. 10-11). They say that this is useful because it undermines the logical possibility of Zombies, (in the philosophical sense). Very briefly, a philosophical Zombie is a functionally and type identical creature to oneself but that lacks conscious mental states. But if a creature can only have conscious mental states in virtue of its being a *Leib* and having a *Korper* then the opposite is also true; it is not possible to have a *Korper* or to be a *Leib* without having conscious mental states. So the Zombie argument does not hold.

Recall that Nagel said:

"[...] fundamentally an organism has conscious mental states if and only if there is something that it is like to be that organism- something it is like for that organism".

Now, however, we get:

Necessarily, for every creature (x), (x) has consciousness or subjective experience if and only if (x) has an animate body.

We have shifted from *something it is like* being an essential feature of a conscious mental state to a creature having an animate body. In the sense that subjectivity is an essential aspect of one's having an animate body the enactivist can explain why there appears to be something it is like to have a conscious mental state in these terms. These subjective terms are still applicable because they come under the two ways in which one can know about or ascribe certain properties to their experience, but they are nothing that is separate from experience defined in terms of the acting body as a living and lived thing.

I think this is reminiscent of Spinoza's understanding of the mind and the body. Spinoza was a material monist, which means he thought there was one fundamental substance that existed. Spinoza called this the "One substance". The "One substance" needs a capital "O" here because Spinoza said the "One substance" was God *or* Nature, *Deus sive Natura*.

Spinoza thought that under the One substance can be conceived in two fundamental ways; under the attribute of thought or under the attribute of extension. This has a massive bearing on the mind body problem because it says there is one substance, the body, and the two attributes thought and extension are two ways of one's knowing or understanding the One substance. In other words, when one talks about the body one can do so in terms of thought or in terms of extension but these are just two *ways of knowing* about the one substance. I think this is neat because we get a conception of the body that avoids making any claim about dual substances. That this is true is in virtue of Spinoza being a monist.

I think there is the possibility that understanding the mind and the body in this way could be beneficial for the enactivist. Hannah and Thompson's idea of the *Leib/Körper* is one way in which we could pursue the idea of the body- subject, and Spinoza's metaphysics is one I am drawn to for similar reasons and in terms of what he says about the two attributes.

If all there really is to a solution to the mind-body problem is this idea of "two ways of knowing", then the mind body problem becomes a part of a different context. Even if this is the solution, I am sure it is not without its problems. But I think I will leave that for another day.

Appendix

[1]



Image taken from: <http://www.lostateminor.com/2008/04/05/the-philosophy-of-andy-warhol/> (16/08/2010)

Notice that when looking at one of the Marilyn's one seems to experience all of the other Marilyn's as present and richly detailed. But it is only possible for one to foveate on one or two at the Marilyn's at one time. So technically one is only really seeing one or two of the Marilyn's present and in rich detail at one time.

[2]

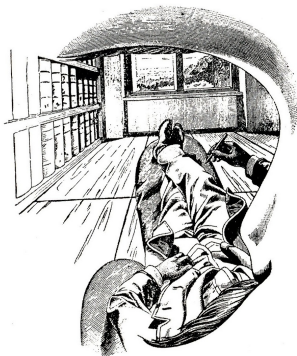


Image taken from Noë (2004 p.36)

Mach's picture of the visual field Mach ([1886] 1959) is supposed to depict what seeing the room is like, "a treatment of the visual experience itself". As Noë says, in this picture "the visible world is represented in consciousness in full detail"

[3]



Image taken from: <http://fc.units.it/ppb/neurobiol/neuroscienze%20per%20tutti/linebs.gif> (16/08/2010)

To see how this works shut your right eye and fixate on the circle with your left eye. Now move the image closer or farther away from you. At some point the gap in the line should appear to disappear and be "filled in". What is happening in the brain that is responsible for this?

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